

An aerial photograph showing a large, dark, irregularly shaped lake (Lake Darling) in the center. The lake is surrounded by a complex network of smaller water bodies, streams, and wetlands, which constitute its watershed. The land is a mix of dark green (forests) and lighter brown/tan (agricultural fields or cleared land). The entire image is framed by a wide, textured yellow border.

Lake Darling

A Lake and Its Watershed

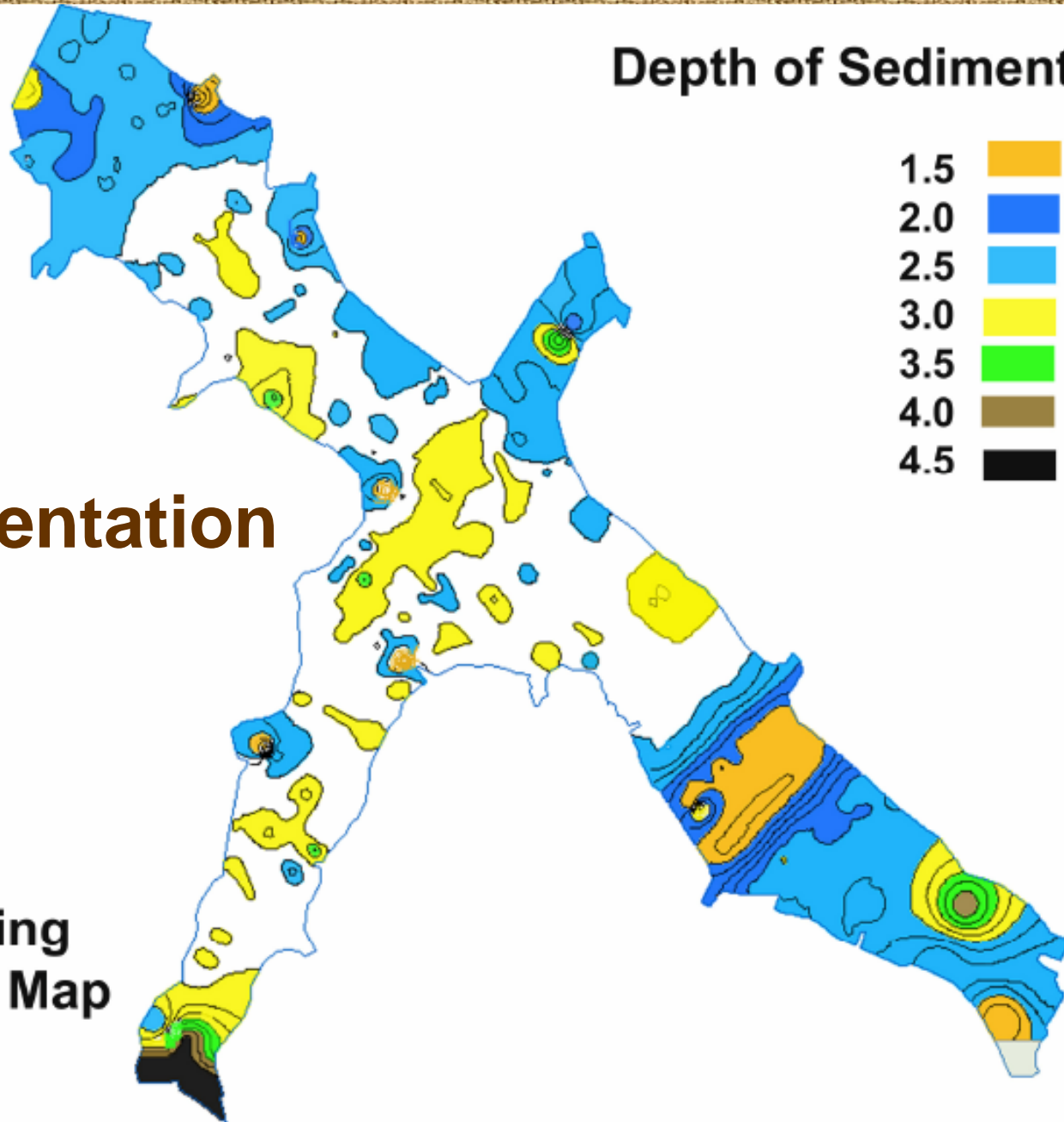
An aerial photograph of Lake Darling, a large, dark, irregularly shaped body of water. The lake is surrounded by a patchwork of land, including fields, forests, and some buildings. The entire image is framed by a wide, textured gold border. The text "So why Lake Darling?" is overlaid in the center in a bright cyan color.

So why Lake Darling?

Sedimentation

Lake Darling
Sediment Map
2002 data

Depth of Sediment in Feet



Bacteria

A petri dish containing a bacterial culture on a grid-patterned agar. The culture shows numerous small, dark blue colonies scattered across the surface. The word "Bacteria" is overlaid in large, orange, 3D-style letters.

Ecoli – Fecal Coliform

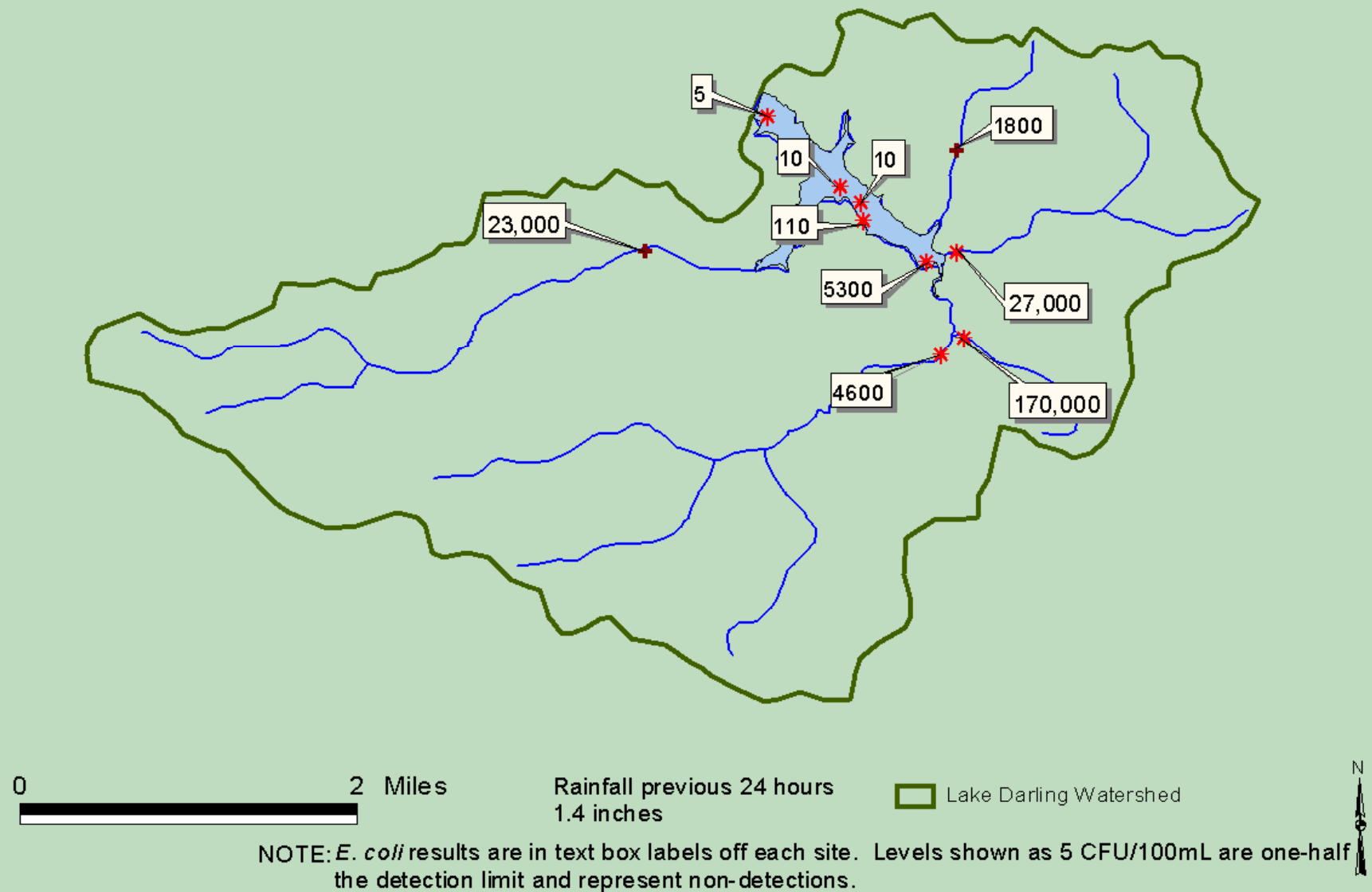


Phosphorus



So What has Been Done ?

Lake Darling Source Tracking *E. coli* Results 6/26/03 (CFU/100mL)



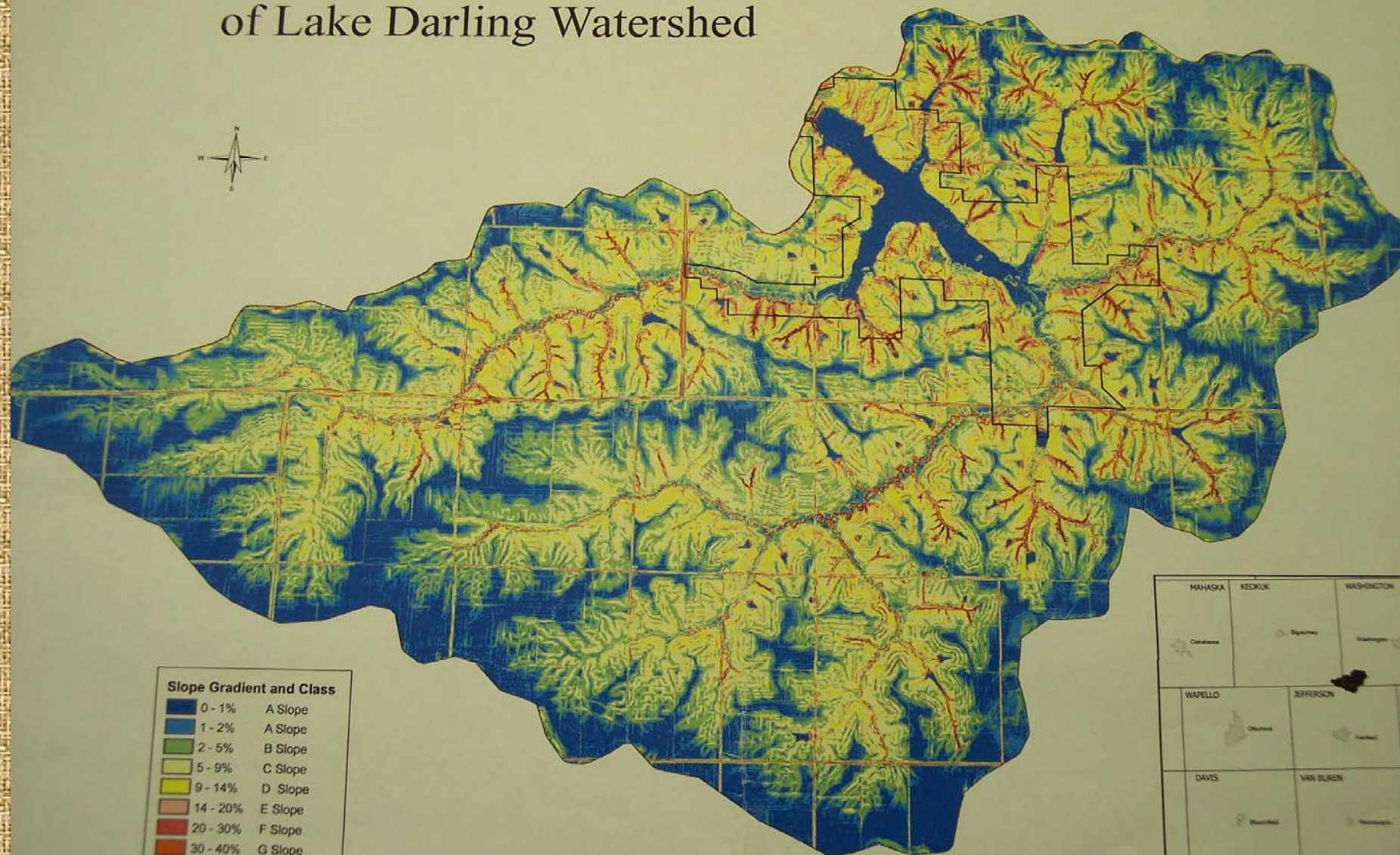
Water Sample



Secchi Disk



LIDAR-Derived Slope Determination of Lake Darling Watershed



Slope Gradient and Class		
0 - 1%	A Slope	
1 - 2%	A Slope	
2 - 5%	B Slope	
5 - 9%	C Slope	
9 - 14%	D Slope	
14 - 20%	E Slope	
20 - 30%	F Slope	
30 - 40%	G Slope	
40 - 100%	G Slope	



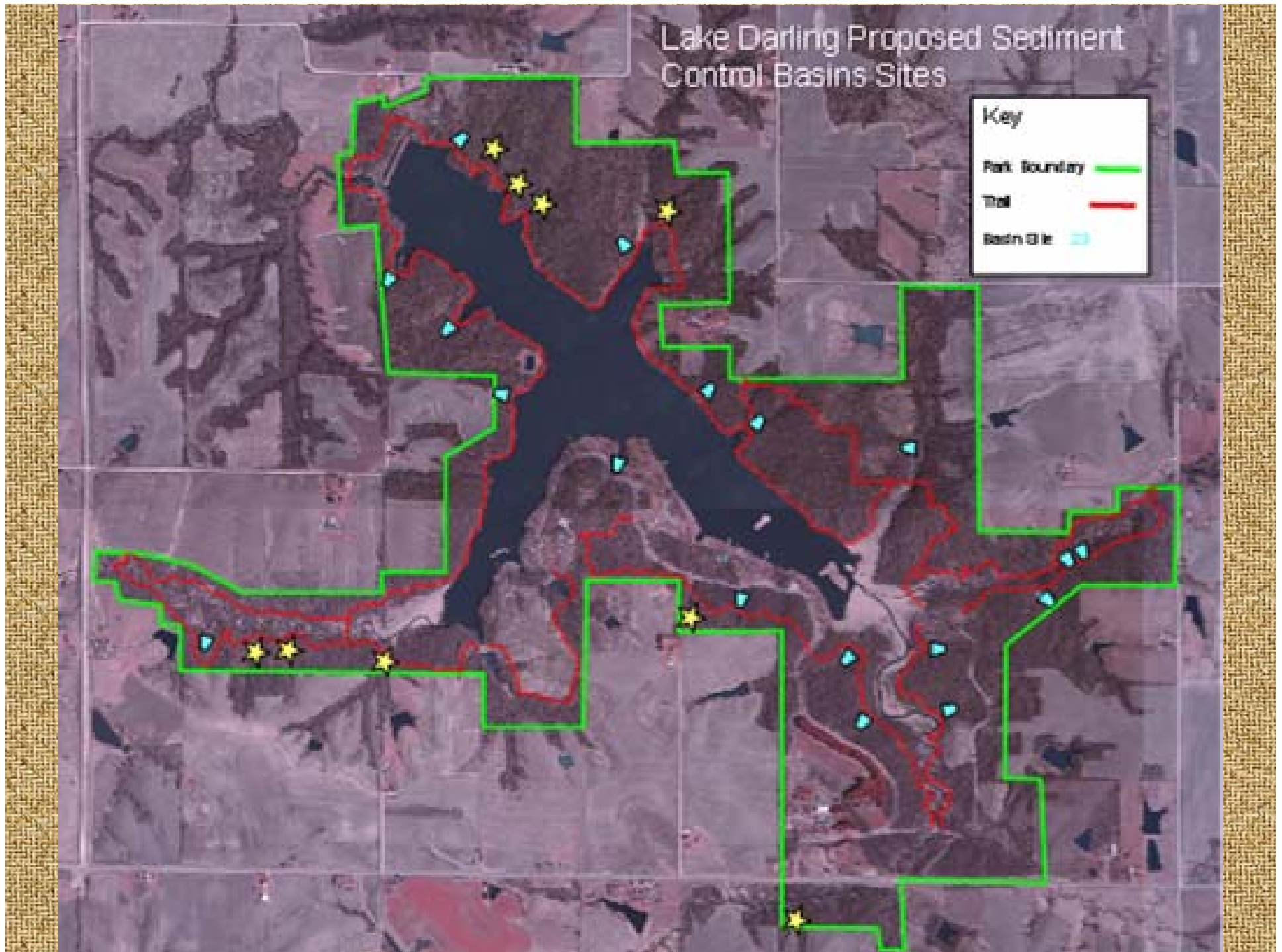
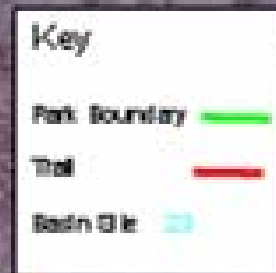
Lake Darling Watershed Installed Conservation Practices Pre-Project thru FFY2006



- Watershed Boundary
- Lake Darling
- Project Sediment Control Structures (2001-2006)
- Project Terraces
- Pre-project Terraces
- Pre-project Sediment Control Structures
- CRP



Lake Darling Proposed Sediment Control Basins Sites





Spillway Investigation

2,091 gallons per minute or
3,011,040 gallons per day





An aerial photograph of a lake, likely a reservoir, surrounded by a mix of green and brown land. The lake is dark blue and irregularly shaped. The entire image is framed by a textured gold border. Overlaid on the image is a list of project goals in red text.

What's next for the Lake

Drain the Lake

Replace the Spillway

Armor the Eroding Shorelines

Remove some of the sediment

Increase the Pool Elevation of the Lake

Establish an Aquatic Plant Community

Eliminate Common Carp and Restock the Lake

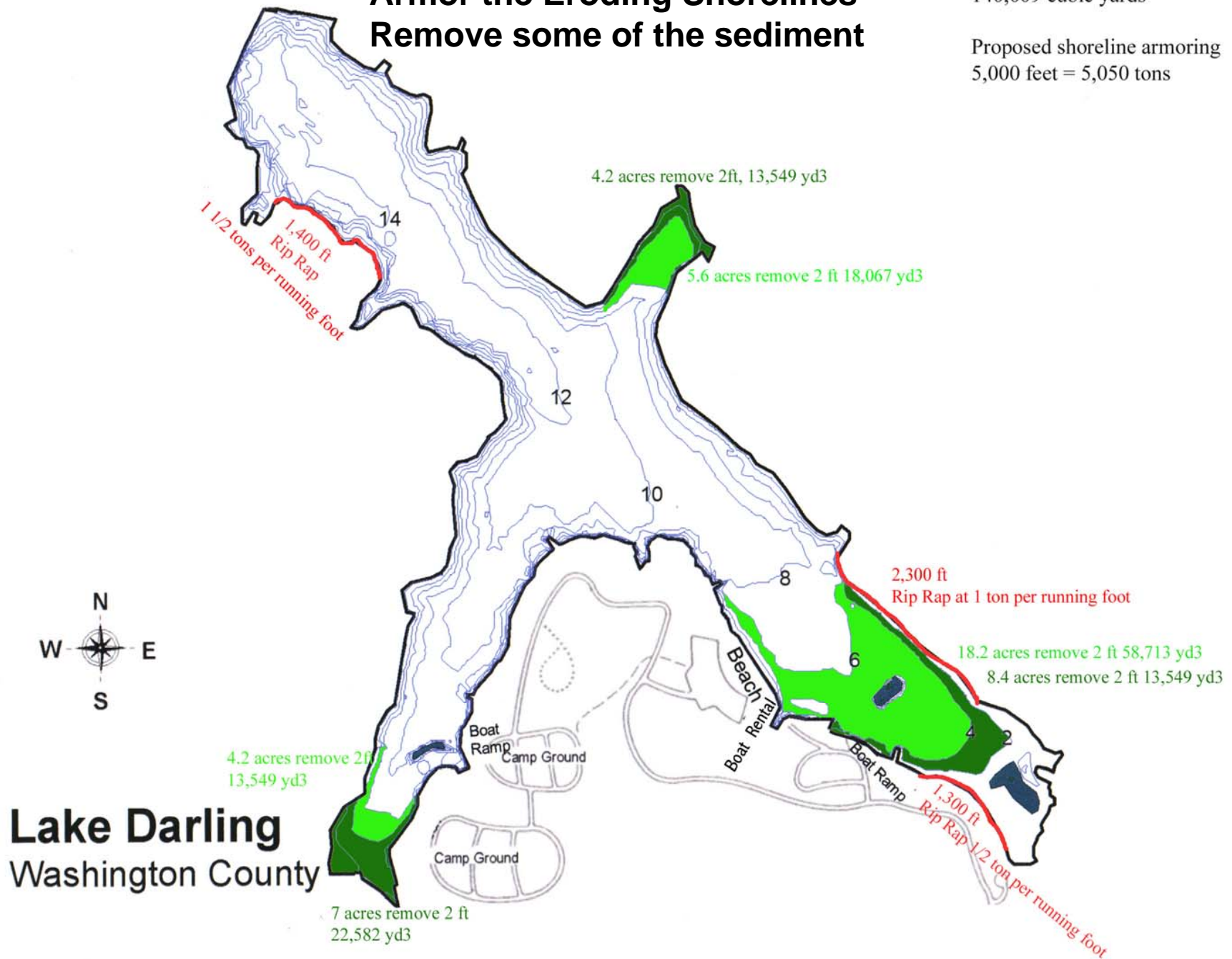
Fish Habitat

**Monitor and Evaluated the Success of the
Project**

Armor the Eroding Shorelines Remove some of the sediment

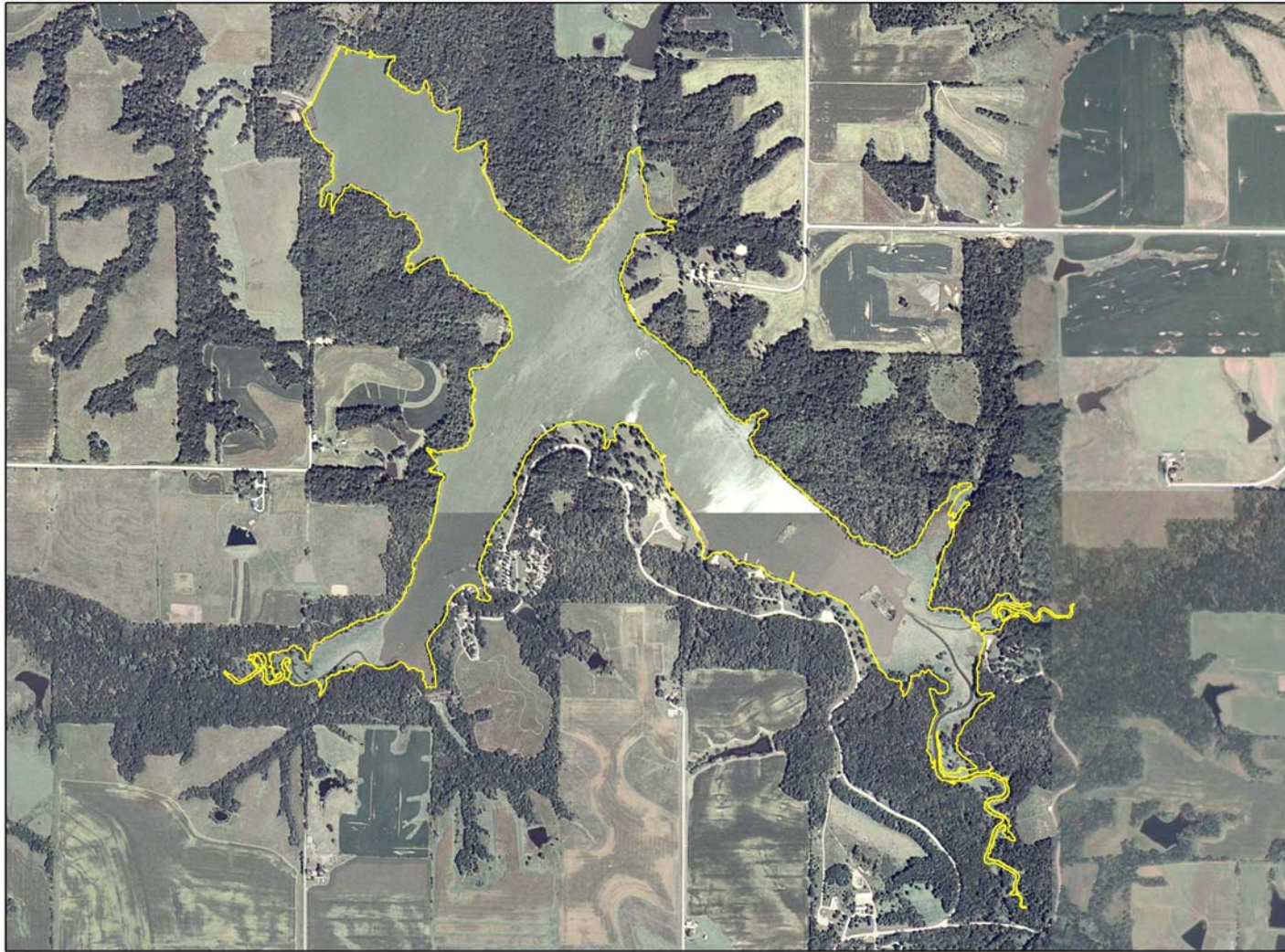
Proposed Sediment Removal
140,009 cubic yards

Proposed shoreline armoring
5,000 feet = 5,050 tons



Increase the Pool Elevation of the Lake

Lake Darling - 658' Water Level



Establish an Aquatic Plant Community





Renovate the Fishery

Estimated 5567 carp in the lake = 18,928 lbs or 71
lbs per acre

Fish Habitat



Monitor and Evaluated the Success of the Project





Iowa Rivers Information System

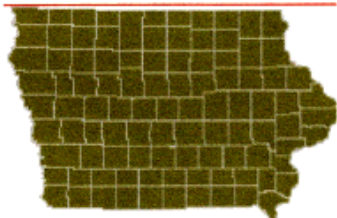
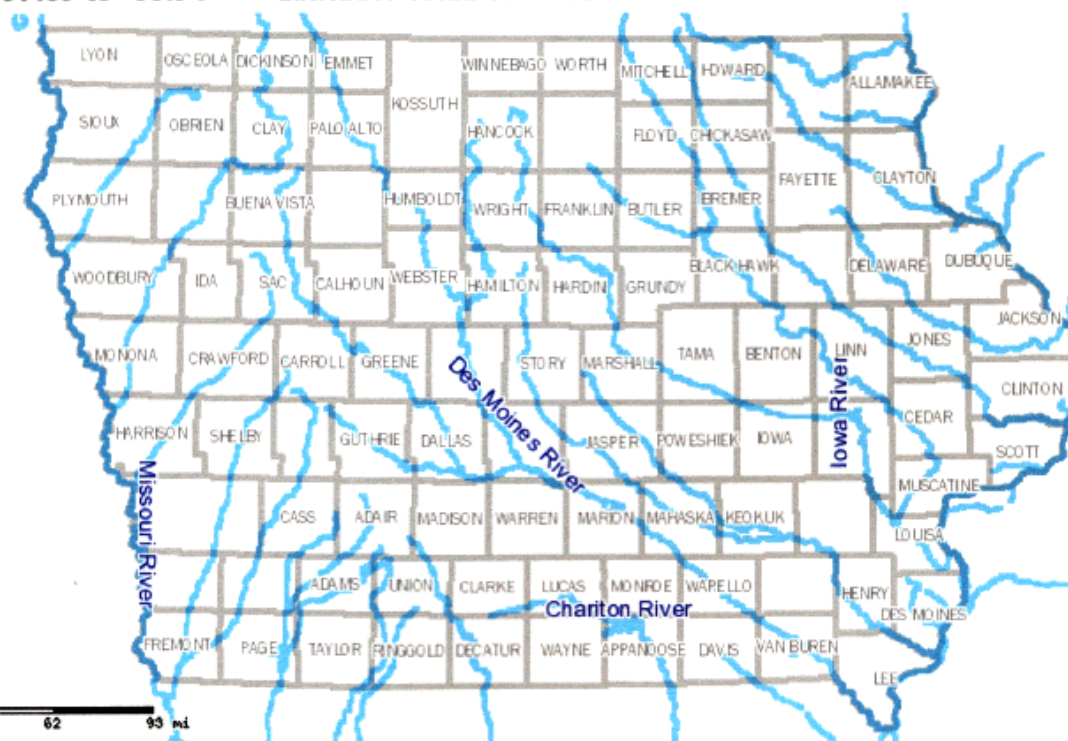
Layers Legend

- ☐ Cities and Towns(points)
- ☐ Fish Surveys
- ☐ IOWATER Sites
- ☐ STORET Sites
- ☐ Flow Variability(Poff)
- ☐ Stream Flow (USGS)
- ☐ Dams/Impoundments
- ☒ Water
- ☒ Rivers
- ☐ Highway
- ☐ Cities and Towns(areas)
- ☐ Watersheds(HUC12)
- ☐ Watersheds(HUC10)
- ☐ Watersheds(HUC8)
- ☐ Rec/Cons Areas
- ☒ County
- ☒ Public Land Survey
- ☐ Human Stressor Index(HS1)



Longitude: -97.89 to -88.94

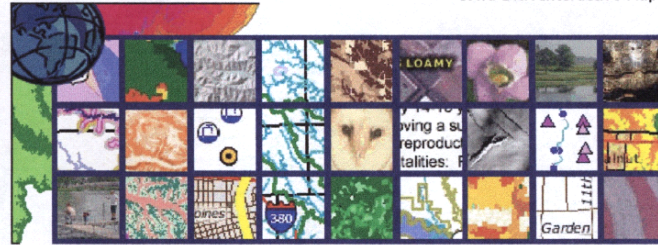
Latitude: 40.22 to 43.62



0 31 62 93 mi



<http://maps.gis.iastate.edu/iris/>

 [Tips](#)[About the DNR](#)[DNR News](#)[Contact Us](#)[Site Map](#)[DNR Homepage](#)
[A-Z Topic Index](#)[Mapping Homepage](#)
[First Time Users](#)
[Recent Updates](#)[LIDAR](#)
[Iowa Lakes Info System
\(with Bathymetric Maps\)](#)
[Iowa NRGIS Library](#)
[Iowa Watershed Initiative](#)[Iowa DNR Interactive Mapping](#)

Are you a [first time user](#)? Or you can check for [recent updates](#).

Interactive Maps

[AFO Siting Atlas](#)
[Anaerobic Digester Map](#)
[Basic Map and Air Photography Viewer](#)
[Facility Explorer](#)
[GEOSAM](#)
[Livestock Burial Zones](#)
[Hydrogeologic Atlas](#)
[National Map \(USGS\)](#)
[Natural Areas Inventory](#)
[Recreation Map](#)
[Water Monitoring Atlas](#)
[Watershed Atlas](#)
[Water Web](#)

Need Help?

[FAQs...](#)
[Map Layout...](#)
[Map Tools...](#)

In the left menu of this website and in alphabetical order below is a list of interactive maps developed by the Iowa Department of Natural Resources (IDNR). For a detailed description of each interactive map, click on the links in the left menu. To go directly to a mapping application, click on a map title below:

[AFO Siting Atlas](#)[Aggregate Planning IMS](#) --- NEW ---[Anaerobic Digester Map](#)

[Basic Map and Air Photography Viewer](#) (this map is being delivered from a new web server address - if you experience problems opening it, then please [adjust your local pop-up blocker settings](#) and try again)

[Facility Explorer](#)[GEOSAM](#)[Hydrogeologic Atlas](#)[Livestock Burial Zones](#)[Leaking Underground Storage Tanks \(LUST\) Sites](#) --- NEW ---[National Map \(USGS\)](#)[Natural Areas Inventory](#)[Recreation Map](#)[Water Monitoring Atlas](#)[Watershed Atlas](#)[Water Web](#) --- UPDATED ---

The websites are interactive mapping applications and may not be accessible for all users. If you experience difficulties viewing this information, please contact Chris Kahle for personal assistance.

Chris Kahle
Iowa Department of Natural Resources
(319) 335-1583
Chris.Kahle@dnr.iowa.gov



GIS Section
Iowa Geological Survey
Iowa DNR

Natural Resources Geographic Information Systems Library

About the NRGIS Library

- [Overview](#)
- [Tips for using the NRGIS Library](#)
- [Updates \(2008\)](#)
 - last month
 - 2007

County-wide Data

- [Data available by County](#)
- [Data available by Theme](#)

State-wide Data

- [Administrative and Political Boundaries](#)
- [Agricultural](#)
- [Basins \(Watersheds\)](#)
- [Biologic and Ecologic](#)
 - Amphibians-Reptiles
 - Birds
 - Fish
 - Forest
 - Mammals
 - Natural Areas Inventory
 - Prairie
- [Cultural and Demographic](#)
- [Elevation](#)
- [Environmental Regulation](#)
- [Geographic](#)

The Natural Resources Geographic Information System (NRGIS) Library is a Geographic Information System (GIS) repository developed and maintained by the GIS Section of the Iowa Department of Natural Resources (DNR). It is a collection of more than 15,000 geographically referenced databases. The purpose of the NRGIS Library is to improve the availability, integration, and analysis of natural resource information and improve decisions to carry out agency responsibilities related to the management, protection and development of Iowa's natural resources. The NRGIS Library is seen as a one-stop repository for all of Iowa's natural resource, geographic information.

